

PPLICATION PUBLISHED UNDER THE PATER



(19) World Intellectual Property **Organization** International Bureau



10/539098

(43) International Publication Date 8 January 2004 (08.01.2004)

PCT

(10) International Publication Number WO 2004/002239 A3

(51) International Patent Classification⁷:

A61K 35/78

(21) International Application Number:

PCT/US2003/020459

(22) International Filing Date: 27 June 2003 (27.06.2003)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data: 60/392,676

28 June 2002 (28.06.2002) US

- (71) Applicant (for all designated States except US): PHAR-MACHEM LABORATORIES, INC. [US/US]; 265 Harrison Avenue, Kearny, NJ 07032 (US).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): SKOP, Mitchell [US/US]; 30 Venus Drive, Closter, NJ 07624 (US). CHOKSHI, Dilip [US/US]; 9 Patrician Court, Parsippany, NJ 07054 (US).
- (74) Agents: BARON, Ronald, J. et al.; Hoffmann & Baron, LLP, 6900 Jericho Turnpike, Syosset, NY 11791 (US).

- (81) Designated States (national): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (regional): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

- with international search report
- (88) Date of publication of the international search report: 18 March 2004

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: PURIFIED AMYLASE INHIBITOR AND NOVEL PROCESS FOR OBTAINING THE SAME

(57) Abstract: The present invention provides a purified amylase inhibitor obtained by a superior process that includes extracting ground beans with supercritical carbon dioxide. The invention also provides a method for inducing weight loss in a mammal in need thereof comprising administering to the mammal, an effective amount of an amylase inhibitor obtained by the superior process. A method for improving post-prandial glucose tolerance in a diabetic mammal comprising administering to the mammal, an effective amount of an amylase inhibitor obtained by the superior process, is also provided.



INTERNATIONAL SEARCH REPORT

International application No.

PCT/US03/20459

	1	,
A. CLASSIFICATION OF SUBJECT MATTER IPC(7) : A61K 35/78 US CL : 424/78	-	
According to International Patent Classification (IPC) or to both nati	ional classification and IPC	
B. FIELDS SEARCHED		
Minimum documentation searched (classification system followed by U.S.: 424/78	y classification symbols)	
Documentation searched other than minimum documentation to the	extent that such documents are included	in the fields searched
Electronic data base consulted during the international search (name	of data base and, where practicable, se	arch terms used)
C. DOCUMENTS CONSIDERED TO BE RELEVANT		
Category * Citation of document, with indication, where ap		Relevant to claim No.
A US 3,950,319 A (SCHMIDT et al.) 13 April 1976 (1	3.04.76), see the entire document.	1-14
A US 4,910,297 A (ZAWISTOWSKA) 20 March 1990	US 4,910,297 A (ZAWISTOWSKA) 20 March 1990 (20.03.90), see the entire document.	
A US 5,726,291 A (MIYAZAKI et al.) 10 March 1998	US 5,726,291 A (MIYAZAKI et al.) 10 March 1998 (10.03.98), see the entire document.	
Euroban denumento que listad in the continuette of Bor C		
I Furner documents are used in the continuation of BOX C.	See patent family annex.	
Further documents are listed in the continuation of Box C. Special categories of cited documents:	See patent family annex. "T" later document published after the in	ternational filing date or priority
Special categories of cited documents: A document defining the general state of the art which is not considered to be of particular relevance.	"T" later document published after the in date and not in conflict with the appl principle or theory underlying the in	lication but cited to understand the evention
Special categories of cited documents: "A" document defining the general state of the art which is not considered to be of particular relevance "E" earlier application or patent published on or after the international filing date	"T" later document published after the in date and not in conflict with the app	lication but cited to understand the evention to be claimed invention cannot be
* Special categories of cited documents: "A" document defining the general state of the art which is not considered to be of particular relevance "E" earlier application or patent published on or after the international filing date "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)	"T" later document published after the in date and not in conflict with the apply principle or theory underlying the in document of particular relevance; the considered novel or cannot be consist when the document is taken alone. "Y" document of particular relevance; the considered to involve an inventive semilatered to involve an inventive semilatered with one or more other su	lication but cited to understand the avention the claimed invention cannot be dered to involve an inventive step the claimed invention cannot be step when the document is such documents, such combination
Special categories of cited documents: "A" document defining the general state of the art which is not considered to be of particular relevance "E" earlier application or patent published on or after the international filing date "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified) "O" document referring to an oral disclosure, use, exhibition or other means "P" document published prior to the international filing date but later than the	"T" later document published after the in date and not in conflict with the app principle or theory underlying the in "X" document of particular relevance; the considered novel or cannot be considered novel or cannot be considered to document is taken alone "Y" document of particular relevance; the considered to involve an inventive s	lication but cited to understand the avention the claimed invention cannot be dered to involve an inventive step are claimed invention cannot be step when the document is such documents, such combination the art
Special categories of cited documents: "A" document defining the general state of the art which is not considered to be of particular relevance "E" earlier application or patent published on or after the international filing date "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified) "O" document referring to an oral disclosure, use, exhibition or other means	"T" later document published after the in date and not in conflict with the appl principle or theory underlying the in "X" document of particular relevance; the considered novel or cannot be considered novel or cannot be considered to involve an inventive seconsidered to involve an inventive seconsined with one or more other subeing obvious to a person skilled in "&" document member of the same pater. Date of mailing of the international se	lication but cited to understand the avention the claimed invention cannot be dered to involve an inventive step the claimed invention cannot be the when the document is such documents, such combination the art int family arch report
* Special categories of cited documents: "A" document defining the general state of the art which is not considered to be of particular relevance "E" earlier application or patent published on or after the international filing date "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified) "O" document referring to an oral disclosure, use, exhibition or other means "P" document published prior to the international filing date but later than the priority date claimed Date of the actual completion of the international search	"T" later document published after the in date and not in conflict with the appl principle or theory underlying the in "X" document of particular relevance; the considered novel or cannot be considered novel or cannot be considered to involve an inventive seconsidered to involve an inventive seconsined with one or more other subeing obvious to a person skilled in "&" document member of the same pater. Date of mailing of the international se	lication but cited to understand the avention the claimed invention cannot be dered to involve an inventive step the claimed invention cannot be the tep when the document is such documents, such combination the art in family
Special categories of cited documents: "A" document defining the general state of the art which is not considered to be of particular relevance "E" earlier application or patent published on or after the international filing date "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified) "O" document referring to an oral disclosure, use, exhibition or other means "P" document published prior to the international filing date but later than the priority date claimed	"T" later document published after the in date and not in conflict with the appl principle or theory underlying the in "X" document of particular relevance; the considered novel or cannot be considered novel or cannot be considered to involve an inventive seconsidered to involve an inventive seconsined with one or more other subeing obvious to a person skilled in "&" document member of the same pater. Date of mailing of the international se	lication but cited to understand the vention e claimed invention cannot be dered to involve an inventive step the claimed invention cannot be the claimed invention cannot be the when the document is such documents, such combination the art art family
* Special categories of cited documents: "A" document defining the general state of the art which is not considered to be of particular relevance "E" earlier application or patent published on or after the international filing date "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified) "O" document referring to an oral disclosure, use, exhibition or other means "P" document published prior to the international filing date but later than the priority date claimed Date of the actual completion of the international search O7 October 2003 (07.10.2003) Name and mailing address of the ISA/US Mail Stop PCT, Attn: ISA/US	"T" later document published after the in date and not in conflict with the apply principle or theory underlying the in "X" document of particular relevance; the considered novel or cannot be consist when the document is taken alone "Y" document of particular relevance; the considered to involve an inventive second with one or more other subeing obvious to a person skilled in "&" document member of the same pater. Date of mailing of the international se	lication but cited to understand the avention the claimed invention cannot be dered to involve an inventive step the claimed invention cannot be the tep when the document is such documents, such combination the art in family
* Special categories of cited documents: "A" document defining the general state of the art which is not considered to be of particular relevance "E" earlier application or patent published on or after the international filing date "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified) "O" document referring to an oral disclosure, use, exhibition or other means "P" document published prior to the international filing date but later than the priority date claimed Date of the actual completion of the international search O7 October 2003 (07.10.2003) Name and mailing address of the ISA/US	"T" later document published after the in date and not in conflict with the apply principle or theory underlying the in "X" document of particular relevance; the considered novel or cannot be consistent of particular relevance; the considered to involve an inventive second with one or more other subeing obvious to a person skilled in "&" document member of the same pater. Date of mailing of the international see Authorized officer	lication but cited to understand the avention the claimed invention cannot be dered to involve an inventive step the claimed invention cannot be the when the document is such documents, such combination the art int family arch report



International application No.

PCT/US03/20459

	1 0 1 0 0 0 0 3 / 2 0 4 3 7	1
A. CLASSIFICATION OF SUBJECT MATTER IPC(7) : A61K 35/78 US CL : 424/78		
According to International Patent Classification (IPC) or to both nation	onal classification and IPC	l
B. FIELDS SEARCHED	olai classification and it C	·
Minimum documentation searched (classification system followed by U.S.: 424/78	classification symbols)	
Documentation searched other than minimum documentation to the e	xtent that such documents are included in	the fields searched
Electronic data base consulted during the international search (name	of data base and, where practicable, sear	ch terms used)
C. DOCUMENTS CONSIDERED TO BE RELEVANT		
Category * Citation of document, with indication, where ap		Relevant to claim No.
A US 3,950,319 A (SCHMIDT et al.) 13 April 1976 (13	3.04.76), see the entire document.	1-14
A US 4,910,297 A (ZAWISTOWSKA) 20 March 1990	US 4,910,297 A (ZAWISTOWSKA) 20 March 1990 (20.03.90), see the entire document.	
A US 5,726,291 A (MIYAZAKI et al.) 10 March 1998	US 5,726,291 A (MIYAZAKI et al.) 10 March 1998 (10.03.98), see the entire document.	
Further documents are listed in the continuation of Box C.	See patent family annex.	
 Special categories of cited documents: "A" document defining the general state of the art which is not considered to be of particular relevance 	"T" later document published after the inte date and not in conflict with the applic principle or theory underlying the inve	ation but cited to understand the
"E" earlier application or patent published on or after the international filing date	"X" document of particular relevance; the considered novel or cannot be consider when the document is taken alone	red to involve an inventive step
"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)	"Y" document of particular relevance; the considered to involve an inventive ste combined with one or more other such	when the document is documents, such combination
"O" document referring to an oral disclosure, use, exhibition or other means	being obvious to a person skilled in th	E WI
"P" document published prior to the international filing date but later than the priority date claimed	"&" document member of the same patent	
Date of the actual completion of the international search 07 October 2003 (07.10.2003)	Date of mailing of the international sear	DEC 2003
Name and mailing address of the ISA/US	Authorized officer	, /
Mail Stop PCT, Attn: ISA/US Commissioner for Patents P.O. Box 1450 Alexandria, Virginia 22313-1450	Raymond J. Henley III Telephone No. 703-308-1235	Mallins of
Facsimile No. (703)305-3230		

Form PCT/ISA/210 (second sheet) (July 1998)